

dine, and then to resume administration at half the original dose if digoxin levels are to remain the same. The serum concentration should be checked after the patient has been on the new regimen for a week.

Quinidine-digoxin toxicity should be treated by discontinuing administration of both drugs. The rapid elimination of quinidine will lead to a fall in digoxin concentration as the volume of distribution of digoxin increases. Lidocaine, bretylium and overdrive-pacing have proved effective in treating arrhythmias, but drugs which prolong the QT interval, such as procainamide and disopyramide should be avoided.

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Prescribing Exercise

INDICATIONS FOR RESTRICTING ACTIVITY until recently have been more clearly defined than indications for exercise. From data accumulated over the past 20 years, guidelines for prescribing exercise have been developed.

A patient's history, findings on physical examination and a multistage exercise test (MSET) form the basis from which an exercise prescription is determined. From the MSET the target heart rate for exercise (peak heart rate and the maximum work load) is derived and the patient can be advised of other activities of equivalent workload which he or she can safely carry out.

The exercise prescription should specify the frequency, intensity, duration and type of exercise. A minimum of three days of exercise a week, preferably nonconsecutive days, is necessary. High-intensity exercise is neither enjoyable nor safe for cardiac patients. Each patient should be advised to exercise to maintain a heart rate of 70 percent to 85 percent that achieved on the MSET. The exercise most easily undertaken, most readily monitored and most often prescribed is walking. Other endurance activities such as jogging, cycling and swimming can also be prescribed.

The usual exercise session should last about an

hour, with 10 minutes of warm-up, 20 to 50 minutes of endurance exercise and 5 to 10 minutes of cool-down. The warm-up and cool-down periods are important and should not be omitted because they serve to develop and maintain flexibility and muscle strength as well as reducing the risk of muscle problems, injuries and fatigue.

A patient's initial level of fitness and clinical status are important considerations when developing the exercise prescription. Typically, an asymptomatic patient who seeks advice concerning exercise is over 40 years old, has a major coronary risk factor or suspected coronary artery disease and has been inactive for some years. Therefore, initial exercise sessions should be short and more frequent. Patients with established cardiac disease or a chronic illness will also need a slow initiation into exercise and special attention to medications that may affect such exertion. Early low-level treadmill testing and exercise for patients after myocardial infarction and myocardial revascularization operations are safe and advantageous. Periodic review and repeat MSE testing are required to adjust the target heart rate with exercise.

Exercise is a lifelong commitment and is most valuable when it is a component of a treatment program that deals with all the cardiovascular risk factors that can be modified or controlled.

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Intracavitary Electrodes for Diagnosis and Treatment of Arrhythmias

ALTHOUGH SEVERAL ARTICLES have reported the use of right atrial intracavitary electrode electrogram monitoring and therapeutic pacing for diagnosis and treatment of atrial arrhythmias, this modality unfortunately has had limited use.

It is well recognized that an arrhythmia such as atrial flutter with 2:1 atrial ventricular conduction may be extremely difficult to diagnose. This form of atrial flutter may be confused with sinus, atrial or junctional tachycardia. If aberrant ventricular conduction is present, confusion with ven-